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MINERAL INDUSTRY SURVEYS

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Copper, Monthly

COPPER IN JULY 1996

Average daily mine production declined by 5% from June's record high level, while daily primary refined production rose 5% from June's depressed level. Production of fire refined copper from scrap declined precipitously as a major producer curtailed operations for much of the month. Note that a major revision was made to the fire refined series for 1995 and 1996 that affects both the refined production (table 4) and the copper recoverable from scrap (table 5).

Consumption of refined copper in July, traditionally a low month, declined by about 10% from June's level, yet remained 11% above July 1995's level. Refined consumption through the first 7 months of 1996 was up by about 2% from that of the equivalent 1995 period. Assuming consumption for the second half of 1996 remains at current levels, consumption for the full year 1996 is projected to rise about 4% above the 1995 level. Stocks of refined copper, which had declined during the previous 2 months, rose in July, commensurate with the summer decline in demand. A shift in inventories

occurred with inventories held in domestic LME warehouses falling to the lowest level of the year, and inventories in Comex warehouses rising. This occurred despite a narrowing in the Comex price premium over the LME price that had existed since February.

Imports of refined copper for the first 6 months of 1996 were up by 60,000 tons, or 28%, from the equivalent 1995 period while exports declined by 65,000 tons, 46%. Consequently net imports of refined copper of 207,000 tons in the first half of 1996 were nearly triple those of the first half of 1995.

Volatility in copper prices, following revelation of Sumitomo's large trading losses in June, continued in July and throughout August and September. Though copper supplies remained tight, analysts believed that projected growth in copper supply over the next few years was having a dampening effect on current prices. As a result, copper prices continued their backwardation, with future copper contracts trading at a discount to spot prices.

TABLE 1
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES 1/

(Metric tons, unless noted)

| | Source table 2/ | 1995 p/ | 1996 | | January- July |
|--|--------------------|--------------|------------|---------|------------------|
| | | | June | July | |
| Production: | | | | | |
| Primary: | | | | | |
| Mine, recoverable | (2) | 1,850,000 | 160,000 r/ | 157,000 | 1,080,000 |
| Smelter 3/ | (3) | 1,240,000 | 107,000 | 106,000 | 734,000 |
| Refinery: | | | | | |
| Electrolytic: | | | | | |
| Domestic | (4) | 1,310,000 | 99,700 | 111,000 | 773,000 |
| Foreign | (4) | 77,300 | 5,180 | 8,090 | 63,400 |
| Electrowon | (4) | 539,000 r/ | 48,100 | 47,400 | 329,000 |
| Total | (4) | 1,930,000 r/ | 153,000 | 166,000 | 1,170,000 |
| Secondary recoverable copper: | | | | | |
| Refineries | (5) | 352,000 r/ | 30,900 r/ | 24,400 | 192,000 |
| Ingot makers 4/ | (5) | 128,000 | 10,600 | 10,600 | 74,400 |
| Brass and wire-rod mills | (5) | 713,000 | 63,700 | 55,600 | 424,000 |
| Foundries, etc. | (5) | 58,500 | 4,880 | 4,880 | 34,100 |
| Consumption: | | | | | |
| Total apparent | (8) | 2,540,000 r/ | 232,000 | NA | NA |
| Refined (reported) | (7) | 2,530,000 | 219,000 r/ | 196,000 | 1,530,000 |
| Purchased copper-base scrap | (9) | 1,650,000 | 149,000 | 127,000 | 964,000 |
| Stocks at end of period: | | | | | |
| Total refined | (11) | 164,000 | 141,000 | 155,000 | XX |
| Blister, etc. | (11) | 174,000 | 158,000 | 148,000 | XX |
| Prices: | | | | | |
| U.S. producer cathode (cents per pound) | (12) | 138.333 | 107.828 | 94.007 | 116.303 |
| Imports: | | | | | |
| Ores and concentrates 5/ | (14) | 127,000 | 24,300 | NA | NA |
| Refined | (14) | 429,000 | 44,600 | NA | NA |
| Exports: | | | | | |
| Ores and concentrates 5/ | (15) | 239,000 | 13,800 | NA | NA |
| Refined | (15) | 217,000 | 10,700 | NA | NA |

p/ Preliminary. r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Numbers in parentheses refer to the detailed tables where these data are located.

3/ From domestic and foreign ores.

4/ Data no longer collected monthly; 1995 and 1996 data estimated based on 1994 monthly average.

5/ Copper content.

TABLE 2
MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES 1/

(Metric tons)

| State | 1995 p/ 2/ | | | | | | | Year total |
|-----------|------------|----------|---------|-----------|---------|----------|----------|-------------|
| | June | July | August | September | October | November | December | |
| Arizona | 101,000 | 98,700 | 100,000 | 102,000 | 104,000 | 101,000 | 105,000 | 1,190,000 |
| Others 3/ | 59,700 | 61,400 | 63,700 | 56,300 | 51,200 | 46,300 | 45,800 | 663,000 |
| Total | 160,000 | 160,000 | 164,000 | 159,000 | 155,000 | 148,000 | 151,000 | 1,850,000 |
| State | 1996 | | | | | | | Jan. - July |
| | January | February | March | April | May | June r/ | July | |
| Arizona | 104,000 | 93,000 | 108,000 | 103,000 | 107,000 | 106,000 | 105,000 | 726,000 |
| Others 3/ | 47,800 | 45,000 | 52,200 | 50,700 | 50,500 | 53,800 | 52,500 | 352,000 |
| Total | 152,000 | 138,000 | 160,000 | 154,000 | 157,000 | 160,000 | 157,000 | 1,080,000 |

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Monthly data and the 1995 "Year total" excludes production by companies reporting on an annual basis.

3/ Includes production from Idaho, Michigan, Missouri, Montana, Nevada, New Mexico, Utah, and Wisconsin.

TABLE 3
COPPER 1/ PRODUCED AT SMELTERS IN THE UNITED STATES, BY SOURCE 2/

(Metric tons, copper content)

| Period | Domestic and foreign ores | Scrap | Total |
|------------|---------------------------|---------|------------|
| 1995: p/ | | | |
| July | 103,000 | 27,800 | 131,000 |
| August | 101,000 | 29,000 | 130,000 |
| September | 100,000 | 28,700 | 129,000 |
| October | 114,000 | 33,900 | 148,000 |
| November | 105,000 | 33,700 | 139,000 |
| December | 106,000 | 35,100 | 141,000 |
| Jan.-Jul. | 717,000 | 197,000 | 915,000 |
| Year total | 1,240,000 | 358,000 | 1,600,000 |
| 1996: | | | |
| January | 113,000 | 29,200 | 142,000 |
| February | 108,000 | 29,800 | 138,000 |
| March | 101,000 | 33,300 | 134,000 |
| April | 105,000 | 28,200 | 133,000 |
| May | 94,300 | 30,600 | 125,000 |
| June | 107,000 | 30,400 | 137,000 r/ |
| July | 106,000 | 31,000 | 137,000 |
| Jan.-Jul. | 734,000 | 213,000 | 946,000 |

p/ Preliminary. r/ Revised.

1/ Includes blister, anode and black copper from primary or secondary sources.

2/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 4
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY 1/

(Metric tons)

| Period | Primary materials | | | | Scrap | | | Total refined |
|------------|-----------------------------|---------|------------|--------------|------------------------------|--------------|------------|---------------|
| | Electrolytically refined 2/ | | Electrowon | Total | Electro-lytically refined 2/ | Fire refined | Total | |
| | Domestic 3/ | Foreign | | | | | | |
| 1995: p/ | | | | | | | | |
| July | 106,000 | 6,510 | 44,300 r/ | 157,000 | 15,400 | 6,120 r/ | 21,500 r/ | 178,000 r/ |
| August | 110,000 | 8,440 | 47,500 r/ | 166,000 | 15,900 | 11,900 r/ | 27,800 r/ | 194,000 r/ |
| September | 105,000 | 6,570 | 48,100 | 160,000 | 16,300 | 11,900 r/ | 28,100 r/ | 188,000 r/ |
| October | 109,000 | 8,490 | 50,400 r/ | 168,000 r/ | 16,000 | 11,700 r/ | 27,700 r/ | 196,000 r/ |
| November | 116,000 | 6,330 | 49,600 r/ | 172,000 r/ | 16,100 | 12,900 r/ | 29,000 r/ | 201,000 r/ |
| December | 112,000 | 7,340 | 50,700 r/ | 170,000 r/ | 16,000 | 11,100 r/ | 27,100 r/ | 197,000 r/ |
| Jan.-Jul. | 758,000 | 40,100 | 293,000 | 1,090,000 | 134,000 | 78,000 | 212,000 | 1,300,000 |
| Year total | 1,310,000 | 77,300 | 539,000 r/ | 1,930,000 r/ | 215,000 | 137,000 r/ | 352,000 r/ | 2,280,000 r/ |
| 1996: | | | | | | | | |
| January | 117,000 | 11,300 | 47,300 | 176,000 | 14,300 | 13,400 r/ | 27,700 r/ | 204,000 r/ |
| February | 107,000 | 9,990 | 43,300 | 160,000 | 13,700 | 12,800 r/ | 26,400 r/ | 187,000 r/ |
| March | 112,000 | 9,570 | 45,700 | 167,000 | 14,200 | 14,000 r/ | 28,200 r/ | 196,000 r/ |
| April | 115,000 | 9,790 | 47,100 | 172,000 | 14,200 | 10,400 r/ | 24,700 r/ | 197,000 r/ |
| May | 112,000 | 9,500 | 50,400 | 172,000 | 16,900 | 12,700 r/ | 29,600 r/ | 201,000 r/ |
| June | 99,700 | 5,180 | 48,100 | 153,000 | 17,300 | 13,700 r/ | 30,900 r/ | 184,000 r/ |
| July | 111,000 | 8,090 | 47,400 | 166,000 | 18,100 | 6,310 | 24,400 | 191,000 |
| Jan.-Jul. | 773,000 | 63,400 | 329,000 | 1,170,000 | 109,000 | 83,300 | 192,000 | 1,360,000 |

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Based on source of material at smelter level.

3/ Includes fire-refined copper.

TABLE 5
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASED SCRAP 1/

(Metric tons, copper content)

| Period | Refineries 2/ | | Ingot makers 3/ | | Brass and wire-rod mills | | Foundries, etc. 4/ | | Total 5/ |
|------------|---------------|------------|-----------------|-----------|--------------------------|-----------|--------------------|-----------|--------------|
| | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | |
| 1995: p/ | | | | | | | | | |
| July | 5,160 | 16,300 r/ | 2,840 | 7,790 | 46,200 | 3,690 | 2,130 | 2,750 | 86,800 r/ |
| August | 9,750 | 18,100 r/ | 2,840 | 7,790 | 51,900 | 4,060 | 2,130 | 2,750 | 99,300 r/ |
| September | 9,160 | 19,000 r/ | 2,840 | 7,790 | 52,500 | 4,550 | 2,130 | 2,750 | 101,000 r/ |
| October | 9,500 | 18,200 r/ | 2,840 | 7,790 | 56,300 | 4,090 | 2,130 | 2,750 | 104,000 r/ |
| November | 10,100 | 18,900 r/ | 2,840 | 7,790 | 54,600 | 3,650 | 2,130 | 2,750 | 103,000 r/ |
| December | 8,870 | 18,200 r/ | 2,840 | 7,790 | 45,400 | 3,650 | 2,130 | 2,750 | 91,700 r/ |
| Jan.- Jul. | 64,300 | 148,000 | 19,900 | 54,500 | 403,000 | 29,300 | 14,900 | 19,200 | 753,000 |
| Year total | 112,000 | 240,000 r/ | 34,000 | 93,500 | 664,000 | 49,300 | 25,500 | 33,000 | 1,250,000 r/ |
| 1996: | | | | | | | | | |
| January | 11,100 | 16,600 r/ | 2,840 | 7,790 | 59,400 | 3,350 | 2,130 | 2,750 | 106,000 r/ |
| February | 9,790 | 16,600 r/ | 2,840 | 7,790 | 54,000 | 2,980 | 2,130 | 2,750 | 98,900 r/ |
| March | 11,100 | 17,200 r/ | 2,840 | 7,790 | 57,600 | 2,660 | 2,130 | 2,750 | 104,000 r/ |
| April | 8,200 | 16,500 r/ | 2,840 | 7,790 | 57,400 | 4,240 | 2,130 | 2,750 | 102,000 r/ |
| May | 10,000 | 19,600 r/ | 2,840 | 7,790 | 59,100 | 4,230 | 2,130 | 2,750 | 108,000 r/ |
| June | 10,900 | 20,000 r/ | 2,840 | 7,790 | 58,800 | 4,960 | 2,130 | 2,750 | 110,000 r/ |
| July | 6,010 | 18,400 | 2,840 | 7,790 | 51,700 | 3,880 | 2,130 | 2,750 | 95,500 |
| Jan.- Jul. | 67,100 | 125,000 | 19,900 | 54,500 | 398,000 | 26,300 | 14,900 | 19,200 | 725,000 |

p/ Preliminary. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Electrolytically refined and fire-refined scrap based on source of material at smelter level.

3/ Data no longer collected monthly; 1995 and 1996 data estimated based on 1994 annual data.

4/ Estimate based on 1994 annual data.

5/ Does not include an estimate, based on reported 1994 data. This comprises a monthly average of 2,930 tons from new scrap and 2,340 tons from old scrap of copper recovered from scrap other than copper-base.

TABLE 6
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD MILL SEMIFABRICATES 1/

(Metric tons, gross weight)

| Period | Production | | Shipments | | Stocks, end of period | |
|------------|-------------|----------------|-------------|----------------|-----------------------|----------------|
| | Brass mills | Wire rod mills | Brass mills | Wire rod mills | Brass mills | Wire rod mills |
| 1995: p/ | | | | | | |
| July | 94,400 | 136,000 | 99,300 | 138,000 | 48,000 | 73,100 |
| August | 114,000 | 148,000 | 113,000 | 163,000 | 49,100 | 58,500 |
| September | 116,000 | 163,000 | 116,000 | 163,000 | 49,600 | 57,600 |
| October | 120,000 | 161,000 | 118,000 | 154,000 | 51,300 | 64,900 |
| November | 113,000 | 143,000 | 118,000 | 141,000 | 46,400 | 67,300 |
| December | 105,000 | 134,000 | 98,600 | 132,000 | 52,500 | 69,100 |
| Jan.- Jul. | 851,000 | 1,070,000 | 867,000 | 1,070,000 | XX | XX |
| Year total | 1,420,000 | 1,820,000 | 1,430,000 | 1,820,000 | XX | XX |
| 1996: | | | | | | |
| January | 120,000 | 146,000 | 122,000 | 147,000 | 50,100 | 68,200 |
| February | 128,000 | 155,000 | 130,000 | 158,000 | 48,800 | 64,900 |
| March | 144,000 | 173,000 | 142,000 | 161,000 | 51,300 | 76,200 |
| April | 131,000 | 158,000 | 133,000 | 177,000 | 49,400 | 57,600 |
| May | 130,000 r/ | 174,000 | 129,000 | 166,000 | 51,000 | 65,200 |
| June | 136,000 r/ | 164,000 r/ | 132,000 r/ | 152,000 r/ | 54,900 r/ | 76,900 |
| July | 114,000 | 141,000 | 117,000 | 153,000 | 52,300 | 64,600 |
| Jan.- Jul. | 904,000 | 1,110,000 | 904,000 | 1,120,000 | XX | XX |

p/ Preliminary. r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 7
CONSUMPTION OF REFINED COPPER 1/

(Metric tons)

| Period and item | Wire rod mills | Brass mills 2/ | Other plants 3/ | Total |
|-----------------------|----------------|----------------|-----------------|------------|
| 1995: p/ | | | | |
| July | 143,000 | 30,600 | 3,920 | 177,000 |
| August | 171,000 | 43,500 | 3,920 | 219,000 |
| September | 169,000 | 44,400 | 3,920 | 218,000 |
| October | 163,000 | 44,000 | 3,920 | 211,000 |
| November | 150,000 | 44,400 | 3,920 | 198,000 |
| December | 132,000 | 40,700 | 3,920 | 176,000 |
| Jan.-Jul. | 1,160,000 | 316,000 | 27,400 | 1,500,000 |
| Year total | 1,950,000 | 533,000 | 47,000 | 2,530,000 |
| 1996: | | | | |
| January | 155,000 | 45,100 | 3,920 | 204,000 |
| February | 166,000 | 47,200 | 3,920 | 217,000 |
| March | 183,000 | 56,400 | 3,920 | 244,000 |
| April | 164,000 | 47,500 | 3,920 | 215,000 |
| May | 185,000 | 47,500 r/ | 3,920 | 236,000 r/ |
| June | 165,000 r/ | 49,600 r/ | 3,920 | 219,000 r/ |
| July: | | | | |
| Cathodes | 148,000 | 27,500 | 1,120 | 177,000 |
| Wire bars | -- | W | W | W |
| Ingots and ingot bars | -- | 2,310 | 1,750 | 4,060 |
| Cakes and slabs | -- | 6,870 | W | 6,870 |
| Billets and other | -- | 7,010 | 1,060 | 8,060 |
| Total | 148,000 | 43,700 | 3,920 | 196,000 |
| Jan.-Jul. | 1,170,000 | 337,000 | 27,400 | 1,530,000 |

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Billets and other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ In 1994, brass mills consumed 2,670 tons of refined lead, 652 tons of pig tin, 3,340 tons of refined nickel, and 90,700 tons of slab zinc.

3/ Estimated consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers; based on 1994 annual data.

TABLE 8
U.S. APPARENT CONSUMPTION OF COPPER 1/

(Metric tons)

| Period | Refined copper production | Copper in old scrap 2/ | Net refined imports | Stock change during period | Apparent consumption |
|------------|---------------------------|------------------------|---------------------|----------------------------|----------------------|
| 1995: p/ | | | | | |
| July | 157,000 r/ | 32,900 r/ | 15,200 | 28,000 | 177,000 r/ |
| August | 166,000 | 35,000 r/ | 15,200 | 9,190 | 207,000 r/ |
| September | 160,000 | 36,400 r/ | 16,500 | 6,270 | 207,000 r/ |
| October | 168,000 r/ | 35,200 r/ | 29,600 | (2,050) | 235,000 r/ |
| November | 172,000 r/ | 35,400 r/ | 31,900 | 5,380 | 234,000 r/ |
| December | 170,000 r/ | 34,800 r/ | 30,800 | 30,900 | 205,000 r/ |
| Jan.-Jun. | 1,090,000 | 235,000 | 72,200 | (33,100) | 1,430,000 |
| Year total | 1,930,000 r/ | 444,000 r/ | 211,000 | 44,500 | 2,540,000 r/ |
| 1996: | | | | | |
| January | 176,000 | 32,900 r/ | 29,400 | 28,600 | 210,000 r/ |
| February | 160,000 | 32,500 r/ | 24,800 | (21,100) | 239,000 r/ |
| March | 167,000 | 32,700 r/ | 35,500 r/ | (7,330) | 243,000 r/ |
| April | 172,000 | 33,600 r/ | 37,300 | 11,000 | 232,000 r/ |
| May | 172,000 | 36,700 r/ | 46,000 | (26,500) | 281,000 r/ |
| June | 153,000 | 37,900 r/ | 33,900 | (6,910) | 232,000 |
| July | 166,000 | 35,200 | NA | 13,900 | NA |
| Jan.-Jun. | 1,000,000 | 206,000 | 207,000 | (22,300) | 1,440,000 |

p/ Preliminary. r/ Revised. NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes reported monthly production of copper from old scrap of copper-base and of non-copper-base materials and estimates for annual reporters based on 1994 data.

TABLE 9
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/

(Metric tons, gross weight)

| Period | Smelters and refineries | | Ingot makers 2/ | | Brass and wire-rod mills 3/ | | Foundries, etc. e/ | | Total scrap used |
|------------|----------------------------|-----------|-----------------|-----------|--------------------------------|-----------|--------------------|-----------|---------------------|
| | New scrap 2/ | Old scrap | New scrap | Old scrap | New scrap | Old scrap | New scrap | Old scrap | |
| 1995: p/ | | | | | | | | | |
| July | 7,680 | 28,000 | 3,800 | 11,600 | 56,400 | 4,360 | 2,400 | 3,100 | 117,000 |
| August | 11,900 | 30,000 | 3,800 | 11,600 | 65,100 | 4,790 | 2,400 | 3,100 | 133,000 |
| September | 10,600 | 31,600 | 3,800 | 11,600 | 64,900 | 5,460 | 2,400 | 3,100 | 133,000 |
| October | 10,800 | 29,800 | 3,800 | 11,600 | 70,100 | 4,950 | 2,400 | 3,100 | 136,000 |
| November | 12,300 | 29,400 | 3,800 | 11,600 | 68,300 | 4,380 | 2,400 | 3,100 | 135,000 |
| December | 10,100 | 31,800 | 3,800 | 11,600 | 57,100 | 4,460 | 2,400 | 3,100 | 124,000 |
| Jan.- Jul. | 72,700 | 232,000 | 26,600 | 81,100 | 501,000 | 35,300 | 16,800 | 21,700 | 988,000 |
| Year total | 128,000 | 385,000 | 45,600 | 139,000 | 827,000 | 59,400 | 28,800 | 37,200 | 1,650,000 |
| 1996: | | | | | | | | | |
| January | 12,600 | 26,600 | 3,800 | 11,600 | 74,300 | 4,100 | 2,400 | 3,100 | 138,000 |
| February | 10,700 | 28,200 | 3,800 | 11,600 | 68,200 | 3,830 | 2,400 | 3,100 | 132,000 |
| March | 11,700 | 32,200 | 3,800 | 11,600 | 72,300 | 3,570 | 2,400 | 3,100 | 141,000 |
| April | 9,680 | 26,800 | 3,800 | 11,600 | 71,900 | 5,000 | 2,400 | 3,100 | 134,000 |
| May | 10,800 | 31,400 | 3,800 | 11,600 | 74,500 | 5,100 | 2,400 | 3,100 | 143,000 |
| June | 13,200 | 36,300 | 3,800 | 11,600 | 73,600 | 5,100 | 2,400 | 3,100 | 149,000 |
| July | 8,120 | 27,700 | 3,800 | 11,600 | 65,800 | 4,790 | 2,400 | 3,100 | 127,000 |
| Jan.- Jul. | 76,800 | 209,000 | 26,600 | 81,100 | 500,000 | 31,500 | 16,800 | 21,700 | 964,000 |

e/ Estimated. p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data for 1995 and 1996 is estimated from 1994 annual data.

3/ Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/ 2/

(Metric tons, gross weight)

| Scrap type and processor | 1995 p/ | | 1996 | | | |
|------------------------------|-----------|------------|-----------|-----------|--------|-----------|
| | Jan.-Jul. | Year total | May | June | July | Jan.-Jul. |
| No. 1 wire and heavy: | | | | | | |
| Smelters and refiners | 87,500 | 145,000 | 12,200 | 13,500 | 5,600 | 77,400 |
| Brass and wire-rod mills | 226,000 | 375,000 | 33,000 r/ | 32,500 r/ | 27,400 | 214,000 |
| No. 2 mixed heavy and light: | | | | | | |
| Smelters and refiners | 123,000 | 210,000 | 17,800 | 22,200 | 16,500 | 118,000 |
| Brass and wire-rod mills | 22,400 | 33,400 | 3,470 | 3,800 | 2,640 | 21,400 |
| Total unalloyed scrap: | | | | | | |
| Smelters and refiners | 211,000 | 355,000 | 29,900 | 35,700 | 22,100 | 195,000 |
| Brass mills | 249,000 | 408,000 | 36,400 r/ | 36,300 r/ | 30,000 | 236,000 |
| Red brass: 3/ | | | | | | |
| All plants | 14,800 | 24,500 | 1,920 | 1,930 | 1,930 | 13,800 |
| Leaded yellow brass: | | | | | | |
| All plants | 211,000 | 346,000 | 33,200 | 32,600 | 31,800 | 220,000 |
| Yellow and low brass: | | | | | | |
| Smelters and refiners | (4/) | (4/) | (4/) | (4/) | (4/) | (4/) |
| Brass mills | 26,200 | 47,500 | 4,150 | 4,240 | 3,950 | 30,100 |
| Cartridge cases and brass: | | | | | | |
| Smelters and refiners | -- | -- | -- | -- | -- | -- |
| Brass mills | 30,800 | 49,400 | 3,830 | 3,930 | 2,240 | 26,300 |
| Auto radiators: | | | | | | |
| Smelters and refiners | 11,300 | 19,400 | 1,620 r/ | 1,620 | 1,620 | 11,300 |
| Bronzes: | | | | | | |
| Smelters and refiners | -- | -- | -- | -- | -- | -- |
| Brass mills | 6,630 | 11,300 | 811 | 905 | 555 | 6,240 |
| Nickel-copper alloys: | | | | | | |
| Smelters and refiners | -- | -- | -- | -- | -- | -- |
| Brass mills | 9,960 | 17,700 | 1,470 | 1,010 | 1,490 | 11,800 |
| Low grade & residues: | | | | | | |
| Smelters and refiners | 47,700 | 80,900 | 5,300 | 6,960 | 7,210 | 44,800 |
| Other alloy scrap: 5/ | | | | | | |
| Smelters and refiners | 23,800 | 39,200 | 3,870 | 3,720 | 3,330 | 23,800 |
| Brass mills | 2,320 | 3,920 | 285 | 428 | 476 | 2,760 |
| Total alloyed scrap: | | | | | | |
| Smelters and refiners | 96,100 | 162,000 | 12,700 | 14,200 | 14,100 | 93,200 |
| Brass mills | 288,000 | 478,000 | 44,200 | 43,200 | 40,500 | 298,000 |
| Total scrap: | | | | | | |
| Smelters and refiners | 307,000 | 517,000 | 42,600 | 49,900 | 36,100 | 288,000 |
| Brass and wire-rod mills | 537,000 | 886,000 | 80,600 r/ | 79,400 r/ | 70,600 | 534,000 |

p/ Preliminary. r/ Revised.

1/ Does not include: consumption by ingot makers, foundries, chemical plants and miscellaneous manufacturers, estimated to total about 20,800 tons of scrap per month in 1995; consumption of home scrap at brass mills which averaged 57,200 tons per month in 1994; includes estimated consumption of 337 tons per month by several copper smelting plants that reported only on an annual basis in 1995.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal and commercial bronze.

4/ Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap."

5/ Includes refinery brass, beryllium copper, phosphor copper and aluminum bronze.

TABLE 11
COPPER STOCKS AT END OF PERIOD 1/

(Metric tons)

| Period | Crude copper 2/ | Refined copper | | | | | LME 6/ | Total refined |
|-----------|-----------------|----------------|-------------------|----------------|----------|----------|--------|---------------|
| | | Refineries 3/ | Wire rod mills 3/ | Brass mills 3/ | Other 4/ | Comex 5/ | | |
| 1995: p/ | | | | | | | | |
| July | 184,000 | 36,800 | 29,000 | 14,700 | 4,100 | 15,100 | 14,300 | 114,000 |
| August | 176,000 | 36,200 | 27,900 | 12,000 | 4,100 | 14,900 | 28,000 | 123,000 |
| September | 170,000 | 38,500 | 24,900 | 11,500 | 4,100 | 10,100 | 40,300 | 129,000 |
| October | 180,000 | 39,600 | 24,900 | 12,100 | 4,100 | 5,540 | 41,200 | 127,000 |
| November | 170,000 | 37,900 | 26,700 | 11,700 | 4,100 | 4,900 | 47,500 | 133,000 |
| December | 174,000 | 38,000 | 24,800 | 7,110 | 4,100 | 21,500 | 68,200 | 164,000 |
| 1996: | | | | | | | | |
| January | 172,000 | 35,700 | 34,500 | 10,400 | 4,100 | 11,000 | 96,700 | 192,000 |
| February | 174,000 | 31,900 | 22,600 | 11,200 | 4,100 | 11,700 | 89,600 | 171,000 |
| March | 150,000 | 33,800 | 19,500 | 9,820 | 4,100 | 12,600 | 84,000 | 164,000 |
| April | 167,000 | 35,800 | 25,500 | 11,300 | 4,100 | 18,800 | 79,400 | 175,000 |
| May | 163,000 | 35,700 | 19,200 | 9,720 | 4,100 | 12,000 | 67,500 | 148,000 |
| June | 158,000 | 34,600 | 13,100 | 12,200 | 4,100 | 6,880 | 70,400 | 141,000 |
| July | 148,000 | 33,000 | 29,900 | 13,400 | 4,100 | 16,100 | 58,700 | 155,000 |

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Copper content of blister and other materials in transit and in process of refining.

3/ Stocks of refined copper as reported; no estimates are made for non-respondents.

4/ Monthly estimates based on reported and 1994 annual data, comprising stocks at secondary smelters, chemical plants, foundries, and miscellaneous manufacturers.

5/ Commodity Exchange Inc., New York.

6/ London Metal Exchange Ltd., U.S. warehouses.

TABLE 12
AVERAGE PRICE OF COPPER IN THE UNITED STATES AND
ON THE LONDON METAL EXCHANGE

(Cents per pound)

| Period | U.S. producers delivered price | | Comex first position 3/ | L.M.E. cash price Grade A |
|-----------|--------------------------------|------------|-------------------------|---------------------------|
| | Cathode 1/ | Wirebar 2/ | | |
| 1995: | | | | |
| July | 141.383 | 150.003 | 138.003 | 139.461 |
| August | 141.128 | 149.774 | 137.774 | 137.718 |
| September | 135.518 | 144.138 | 132.138 | 132.216 |
| October | 131.380 | 139.995 | 127.996 | 127.582 |
| November | 139.860 | 148.500 | 136.500 | 134.986 |
| December | 135.103 | 143.778 | 131.778 | 132.683 |
| Average | 138.333 | 146.724 | 134.717 | 133.122 |
| 1996: | | | | |
| January | 121.431 | 130.090 | 118.091 | 118.622 |
| February | 120.020 | 128.668 | 116.668 | 115.077 |
| March | 121.540 | 130.200 | 118.200 | 116.140 |
| April | 122.628 | 131.286 | 119.286 | 117.707 |
| May | 126.667 | 135.327 | 123.327 | 120.527 |
| June | 107.828 | 116.538 | 104.488 | 98.447 |
| July | 94.007 | 102.693 | 90.667 | 90.006 |
| Average | 116.303 | 124.972 | 112.961 | 110.932 |

1/ Listed as "U.S. producer cathode."

2/ Listed as "Electrolytic wirebar (Warrenton Refining Co.)."

3/ Listed as "Comex high grade first position."

TABLE 13
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

| Month | Brass mills No. 1 scrap | Refiners No. 2 scrap | Dealers (New York) | |
|-----------|----------------------------|-------------------------|--------------------|-----------------------------------|
| | | | No. 2 scrap | Red brass turnings and borings |
| 1995: | | | | |
| July | 126.07 | 109.62 | 94.05 | 66.58 |
| August | 126.68 | 110.77 | 95.00 | 68.00 |
| September | 122.59 | 105.99 | 94.10 | 68.00 |
| October | 120.17 | 104.50 | 92.27 | 67.00 |
| November | 125.91 | 106.96 | 91.80 | 66.00 |
| December | 120.89 | 103.96 | 92.00 | 66.00 |
| Average | 123.28 | 104.73 | 91.26 | 63.38 |
| 1996: | | | | |
| January | 112.46 | 95.09 | 87.98 | 57.86 |
| February | 111.85 | 93.83 | 89.75 | 57.00 |
| March | 113.06 | 96.54 | 92.53 | 57.66 |
| April | 114.20 | 96.99 | 84.43 | 58.00 |
| May | 116.25 | 97.10 | 84.59 | 57.84 |
| June | 96.95 | 83.00 | 77.85 | 55.35 |
| July | 88.58 | 69.76 | 64.43 | 46.79 |
| Average | 107.62 | 90.33 | 83.08 | 55.79 |

Source: American Metal Market.

TABLE 14
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

| Country or territory | Ore and concentrate | | | Matte, ash and precipitates | | | Blister and anodes | | | Refined | | |
|-------------------------|---------------------|--------|-----------|-----------------------------|------|-----------|--------------------|--------|-----------|---------|--------|-----------|
| | 1995 | 1996 | | 1995 | 1996 | | 1995 | 1996 | | 1995 | 1996 | |
| | | Jun. | Jan.-Jun. | | Jun. | Jan.-Jun. | | Jun. | Jan.-Jun. | | Jun. | Jan.-Jun. |
| Brazil | -- | -- | -- | -- | -- | -- | -- | -- | -- | 15,500 | -- | 11,600 |
| Canada | (2/) | 4,370 | 4,370 | 590 | 112 | 162 | 40,000 | (2/) | 2,610 | 283,000 | 30,300 | 184,000 |
| Chile | 80,400 | 19,900 | 52,400 | -- | -- | -- | 38,000 | 8,830 | 28,800 | 29,100 | 7,680 | 36,000 |
| Germany | -- | -- | -- | -- | -- | -- | -- | -- | -- | 12,300 | -- | (2/) |
| Japan | -- | -- | -- | 4 | -- | -- | (2/) | -- | -- | 7,740 | 536 | 1,280 |
| Kazakhstan | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1,000 | 2,110 |
| Malaysia | -- | -- | -- | 55 | 2 | 79 | -- | -- | -- | -- | -- | -- |
| Mexico | 11,700 | -- | 275 | 2,190 | 62 | 1,120 | 2,350 | 4,030 | 18,300 | 58,600 | 1,180 | 20,000 |
| Peru | 34,900 | -- | -- | -- | -- | -- | 10,400 | -- | -- | 9,860 | 3,700 | 22,100 |
| Russia | -- | -- | -- | -- | -- | -- | -- | -- | -- | 11,600 | -- | 4,360 |
| South Africa | 1 | -- | -- | 11 | -- | -- | -- | -- | 638 | 2 | -- | -- |
| Spain | -- | -- | -- | -- | -- | -- | 3,260 | -- | 1,730 | -- | -- | -- |
| Taiwan | -- | -- | -- | 1 | 5 | 19 | -- | -- | -- | -- | -- | -- |
| Other | 1 | 3 | 3 | 2 | -- | 1 | -- | -- | 1 | 618 | 170 | 2,520 |
| Total | 127,000 | 24,300 | 57,100 | 2,860 | 181 | 1,380 | 94,100 | 12,900 | 52,100 | 429,000 | 44,600 | 284,000 |

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 15
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

| Country or territory | Ore and concentrate | | | Matte, ash and precipitates | | | Blister and anodes | | | Refined | | |
|-------------------------|---------------------|--------|-----------|-----------------------------|-------|-----------|--------------------|-------|-----------|---------|--------|-----------|
| | 1995 | 1996 | | 1995 | 1996 | | 1995 | 1996 | | 1995 | 1996 | |
| | | Jun. | Jan.-Jun. | | Jun. | Jan.-Jun. | | Jun. | Jan.-Jun. | | Jun. | Jan.-Jun. |
| Belgium | 1,980 | -- | -- | 1,330 | -- | 3 | 81 | -- | -- | 2,260 | 9 | 35 |
| Canada | 123,000 | 3,370 | 43,900 | 30,400 | 3,060 | 18,800 | 24,800 | 1,070 | 10,300 | 22,900 | 2,670 | 14,200 |
| China | 37,100 | 10,400 | 51,800 | 17 | -- | -- | 211 | -- | 20 | 5,130 | -- | -- |
| Germany | -- | -- | -- | 152 | -- | -- | 84 | 57 | 321 | 629 | 10 | 61 |
| Hong Kong | -- | -- | 16 | 48 | -- | 29 | 650 | 59 | 372 | 4,710 | 93 | 377 |
| India | -- | -- | -- | 151 | -- | 271 | 36 | -- | -- | 138 | -- | 7 |
| Italy | -- | -- | 8 | -- | -- | -- | 245 | 59 | 424 | 1,580 | 65 | 2,150 |
| Japan | 53,500 | -- | 5,530 | 1,880 | 40 | 1,660 | 363 | 55 | 387 | 52,800 | 1,690 | 11,800 |
| Korea, Republic of | 5,520 | -- | 2 | 10 | -- | 10 | 1,440 | -- | 420 | 11,200 | -- | 1,510 |
| Malaysia | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4,110 | 73 | 4,400 |
| Mexico | 160 | 15 | 2,340 | 763 | 52 | 237 | 219 | 54 | 212 | 2,710 | 9 | 2,550 |
| Peru | 1,180 | -- | 1,750 | 9 | -- | -- | -- | -- | -- | -- | -- | 129 |
| Philippines | 16,000 | -- | -- | -- | -- | -- | 20 | -- | 8 | 3 | -- | -- |
| Singapore | 5 | -- | -- | 18 | -- | -- | 39 | 3 | 40 | 12,700 | 501 | 1,020 |
| Taiwan | -- | -- | -- | 201 | -- | -- | 137 | -- | 161 | 75,000 | 2,090 | 21,800 |
| Thailand | 34 | -- | -- | -- | -- | -- | 124 | -- | 58 | 18,700 | 3,430 | 16,200 |
| Venezuela | -- | -- | -- | -- | -- | -- | 860 | -- | 6 | 27 | -- | 20 |
| Other | 341 | 48 | 218 | 69 | 8 | 206 | 190 | -- | 188 | 2,890 | 24 | 536 |
| Total | 239,000 | 13,800 | 105,000 | 35,100 | 3,160 | 21,200 | 29,500 | 1,350 | 13,000 | 217,000 | 10,700 | 76,700 |

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 16
U.S. COPPER SCRAP TRADE 1/

(Metric tons, gross weight)

| Country or territory | Imports | | | | | | Exports | | | | | |
|-------------------------|-----------|-------|-----------|----------|-------|-----------|-----------|--------|-----------|----------|-------|-----------|
| | Unalloyed | | | Alloyed | | | Unalloyed | | | Alloyed | | |
| | 1996 | | | 1996 | | | 1996 | | | 1996 | | |
| | 1995 | Jun. | Jan.-Jun. | 1995 | Jun. | Jan.-Jun. | 1995 | Jun. | Jan.-Jun. | 1995 | Jun. | Jan.-Jun. |
| Belgium | 11 | -- | -- | 294 | -- | -- | 2,730 | 1,620 | 2,840 | 32 | -- | -- |
| Canada | 36,600 | 2,990 | 19,300 | 64,600 | 4,180 | 29,700 | 110,000 | 8,870 | 56,000 | 30,300 | 2,190 | 14,400 |
| Chile | 9,270 | 1,740 | 5,740 | 66 | -- | 110 | -- | -- | -- | -- | -- | 3 |
| China | -- | -- | -- | 21 | 1 | 62 | 28,000 | 1,140 | 7,420 | 7,380 | 247 | 1,110 |
| Colombia | 325 | 26 | 407 | 1,280 | 235 | 1,930 | -- | -- | -- | -- | -- | -- |
| Costa Rica | 848 | 307 | 723 | 524 | 66 | 199 | -- | -- | -- | -- | -- | -- |
| Dominican Republic | 702 | 6 | 242 | 1,860 | 189 | 1,150 | -- | -- | -- | -- | -- | -- |
| Germany | -- | (2/) | 3 | 64 | 3 | 45 | 1,580 | -- | 291 | 1,190 | 80 | 388 |
| Hong Kong | -- | -- | -- | 23 | -- | 111 | 31,400 | 2,760 | 16,300 | 7,810 | 703 | 4,260 |
| India | -- | -- | -- | -- | -- | -- | 7,100 | 1,040 | 3,380 | 25,400 | 1,200 | 8,760 |
| Japan | -- | -- | -- | 124 | (2/) | 2 | 20,100 | 1,860 | 8,090 | 3,870 | 402 | 1,630 |
| Korea, Republic of | -- | -- | -- | 14 | -- | -- | 10,300 | 610 | 3,440 | 1,480 | 52 | 193 |
| Mexico | 32,800 | 2,200 | 15,900 | 50,500 | 3,630 | 25,300 | 6,470 | 328 | 2,390 | 37 | -- | -- |
| Panama | 1,170 | 79 | 436 | 776 | 60 | 537 | -- | -- | -- | -- | -- | -- |
| Switzerland | -- | -- | -- | -- | -- | -- | 17 | 508 | 508 | 56 | -- | -- |
| Taiwan | -- | 3 | 32 | 2,940 | 147 | 812 | 1,680 | 99 | 383 | 832 | 59 | 459 |
| Thailand | -- | -- | -- | 8 | 16 | 36 | -- | -- | 17 | 827 | 60 | 322 |
| United Kingdom | 111 | -- | -- | 201 | 154 | 612 | 338 | -- | 71 | 309 | -- | 21 |
| Venezuela | 3,260 | 240 | 1,960 | 2,860 | 228 | 1,610 | -- | -- | -- | -- | -- | -- |
| Other | 2,990 r/ | 178 | 2,210 | 7,400 r/ | 587 | 4,540 | 3,570 r/ | 115 | 376 | 1,120 r/ | 35 | 279 |
| Total | 88,100 | 7,770 | 47,000 | 134,000 | 9,490 | 66,800 | 223,000 | 18,900 | 101,000 | 80,600 | 5,030 | 31,800 |

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 17
U.S. IMPORTS OF COPPER SULFATE 1/

(Gross weight, metric tons)

| Country or territory | 1995 | 1996 | | | | | Year to date |
|----------------------|--------|---------------|----------------|-------|-------|-------|--------------|
| | | First quarter | Second quarter | | | Total | |
| | | | April | May | June | | |
| Canada | 1,960 | 979 | 241 | 550 | 317 | 1,110 | 2,090 |
| Chile | 250 | -- | -- | 41 | 41 | 83 | 83 |
| China | 68 | 78 | 100 | 140 | 140 | 380 | 458 |
| Israel | 1,680 | 231 | 82 | 61 | 102 | 245 | 477 |
| Mexico | 5,570 | 2,480 | 651 | 1,100 | 801 | 2,550 | 5,030 |
| Netherlands | 542 | -- | -- | -- | -- | -- | -- |
| Peru | 579 | 98 | 118 | 60 | 118 | 296 | 394 |
| Poland | 404 | -- | -- | -- | -- | -- | -- |
| Russia | 333 | 8 | -- | -- | -- | -- | 8 |
| South Africa | 736 | -- | -- | -- | -- | -- | -- |
| Other | 289 r/ | 22 r/ | 12 | 5 | 2 | 19 | 41 |
| Total | 12,400 | 3,890 | 1,200 | 1,950 | 1,520 | 4,680 | 8,570 |

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 18
U.S. EXPORTS OF COPPER SULFATE 1/

(Gross weight, metric tons)

| Country or territory | 1995 | 1996 | | | | | Year to date |
|----------------------|-------|---------------|----------------|-----|------|-------|--------------|
| | | First quarter | Second quarter | | | Total | |
| | | | April | May | June | | |
| Belgium | -- | 21 | -- | -- | -- | -- | 21 |
| Canada | 2,870 | 799 | 247 | 254 | 85 | 586 | 1,390 |
| Chile | 33 | -- | -- | -- | -- | -- | -- |
| Colombia | 62 | -- | -- | -- | -- | -- | -- |
| Denmark | -- | -- | -- | 7 | -- | 7 | 7 |
| Dominican Republic | -- | 9 | -- | -- | -- | -- | 9 |
| Honduras | 43 | 6 | 20 | -- | -- | 20 | 26 |
| Hong Kong | 2 | -- | -- | -- | -- | -- | -- |
| Pakistan | -- | -- | -- | 5 | -- | 5 | 5 |
| Qatar | -- | -- | -- | 4 | -- | 4 | 4 |
| Other | 69 r/ | 10 r/ | -- | 2 | -- | 2 | 12 |
| Total | 3,080 | 845 | 266 | 272 | 85 | 624 | 1,470 |

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.